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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/790,787

03/03/2004

Takashi Sanse

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EXAMINER

PARK, EDWARD

ART UNIT

PAPER NUMBER

2609

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
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3 MONTHS

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/12/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/790,787

Applicant(s)

SANSE ET AL.

Examiner

Edward Park

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/3/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Claim Objections

2. **Claim 12** is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, claim 12 has not been further treated on the merits.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 1, 4, 7, and 11** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex*

parte Wu, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation "various kinds of information", and the claim also recites "personal information" which is the narrower statement of the range/limitation.

The following will be assumed for examination purposes for claims 1 and 4: "an information storage area for storing ~~various kinds of information including~~ personal information of the person of the face photo".

The following will be assumed for examination purposes for claim 7: "displaying ~~various kinds of information including~~ the photographed face data".

The following will be assumed for examination purposes for claim 11: "reception of ~~various kinds of information~~".

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. **Claims 1, 4, 6, 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al. (US 5,432,864) in view of Bennett (US 5,642,160).

Regarding **claim 1**, the Lu reference teaches an information storage area (fig. 4, numeral 31; “escort memory (e.g. a magnetic strip on a credit card)”); Lu: col. 9, lines 25-27) including personal information of the person of the face photo (“eigenface, eigenfeature parameters is then stored in escort memory”; Lu: col. 8, lines 40-46); code conversion means (fig. 2a, numeral 5; “image processing unit”; Lu: col. 7, lines 32-47) for converting the face photo data into code information (“image processing steps applied to the digital image include intensity normalization, background deletion, shade analysis....”; Lu: col. 7, lines 32-47); and code information recording means for storing the code information in the information storage area (fig. 3, numeral 12; “ID card writer 12 function as enrollment apparatus”; Lu: col. 8, lines 48-49).

The Lu reference does not teach photography means for obtaining face photo data representing a face photo area of a predetermined format by photographing the face photo area in an ID card comprising the face photo area added with a face photo of the predetermined format.

Bennett, in the same field of “capturing digital images of photo identification cards” (Bennett: col. 1, lines 7-10) teaches photography means (fig. 2, numeral 10; “digital image capture device”; Bennett: col. 3, line 16-17) for obtaining face photo data representing a face photo area of a predetermined format by photographing the face photo area in an ID card comprising the face photo area added with a face photo of the predetermined format (“capture a digital image of the card”; Bennett: col. 3, line 16-17).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Lu reference to utilize photo data of Sakuramoto, in order to “prevent others from making copies of the card” by “storing high quality digital image of the card” (Bennett: col. 1, lines 30-33) that further enhances biometric security.

Regarding **claim 4**, the Lu reference teaches an information storage area (fig. 4, numeral 31; “escort memory (e.g. a magnetic strip on a credit card)”; Lu: col. 9, lines 25-27) including personal information of the person of the face photo (“eigenface, eigenfeature parameters is then stored in escort memory”; Lu: col. 8, lines 40-46), wherein the information storage area stores code information generated by converting face photo data (“Eigenface, Eigenfeature parameters is then stored in escort memory”; Lu: col. 8, lines 40-46).

The Lu reference does not teach a face photo area added with a face photo of a predetermined format and photographing the face photo area and represents the face photo are of the predetermined format.

Bennett, in the same field of “capturing digital images of photo identification cards” (Bennett: col. 1, lines 7-10) teaches a face photo area added with a face photo of a predetermined format (fig. 1, numeral 70) and photographing (“digital image capture device”; Bennett: col. 3,

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lines 16-18) the face photo area and represents the face photo area of the predetermined format (“capture a digital image of the card”; Bennett: col. 3, lines 16-18).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Lu reference to utilize face photo area and photographing the face photo area of Bennett, in order to utilize a person’s face as a means of identification and “prevent others from making copies of the card” by “storing high quality digital image of the card” (Bennett: col. 1, lines 30-33) that further enhances biometric security.

Regarding **claim 6**, the Lu reference as applied to claim 4 teaches a face authentication terminal comprising:

a photography means (fig. 5, numeral 32) and an information reading means for reading the personal information and the code information from the information storage area (fig. 3, numeral 12; “card reader”; Lu: col. 6, line 12).

The Lu reference as applied to claim 4 does not teach obtaining photographed face data representing a face image of a holder of the ID card in Claim 4 in the predetermined format by photographing the face of the holder.

Bennett, in the same field of “capturing digital images of photo identification cards” (Bennett: col. 1, lines 7-10) teaches obtaining photographed face data (fig. 2, numeral 10; “digital image capture device”; Bennett: col. 3, line 16-17) representing a face photo area of a predetermined format by photographing the face photo area in an ID card in claim 4 (see combinations, rejections, and motivations stated above in claim 4) comprising the face photo area added with a face photo of the predetermined format by photographing the face of the holder (“capture a digital image of the card”; Bennett: col. 3, line 16-17).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Lu reference to obtain photographed face data of Bennett, in order to “prevent others from making copies of the card” by “storing high quality digital image of the card” (Bennett: col. 1, lines 30-33) that further enhances biometric security.

Regarding **claim 7**, the Lu reference teaches a display means for displaying photographed face data (“generates an image of a person .. with other data stored on a card, badge, or tag carried by the person whose image is to be generated”; Lu: col. 5, lines 64-68)

8. **Claims 2, 3, 5** are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Lu et al. (US 5,432,864) with Bennett (US 5,642,160) as applied to claim 1 above, and further in view of Sakuramoto (JP 2002-152492).

Regarding **claim 2**, the Lu and Bennett combination as applied to claim 1 teaches a photography means for obtaining original image data representing an original image including the face of the person, the ID card of whom is being generated, by photographing the face (fig. 2a, numeral 28a; “video camera apparatus is used to obtain pictures of each of the selected individuals”; Lu: col. 6, lines 58-59).

The Lu and Bennett combination does not disclose eye position detection means for detecting center positions of eyes in the face in the original image; normalization means for obtaining a normalized original image by normalizing the original image in such a manner that a distance between the center positions of the eyes that have been detected becomes a predetermined value; and cutting means for obtaining face image data representing the face photo by cutting an image having the predetermined format from the normalized original image

with reference to the distance between the center positions of the eyes in the face in the normalized original image.

Sakuramoto teaches:

eye position detection means for detecting center positions of eyes in the face in the original image (“algorithm which detects the location equivalent to the eyes”; “location which corresponds in the center of abbreviation along the longitudinal direction which intersects perpendicularly in the direction of top and bottom of the location which is equivalent to the detected both-eyes section in invention according to claim 3 So that it may consider as the center position of the trimming field along a longitudinal direction”; Sakuramoto: paragraph [0021]), (“detects respectively the location equivalent to the location and the eye section equivalent”; Sakuramoto: paragraph [0030]);

normalization means for obtaining a normalized original image by normalizing the original image in such a manner that a distance between the center positions of the eyes that have been detected becomes a predetermined value (“trimming field to said subject-copy image is set up based on the location equivalent to the location and the eye section equivalent”; Sakuramoto: paragraph [0029]); and

cutting means for obtaining face image data representing the face photo by cutting an image having the predetermined format from the normalized original image with reference to the distance between the center positions of the eyes in the face in the normalized original image (“sets up the trimming field to said subject-copy image”; Sakuramoto: paragraph [0030]).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Lu and Bennett combination as applied to claim 1, to include eye position

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detection, normalization, and cutting of Sakuramoto, in order to “mitigate the burden of the operator at the time of setting up of a trimming field” and isolate the facial features in a “short time [with a] high degree of accuracy” (Sakuramoto: paragraph [0009] and [0014]).

Regarding **claim 3**, the Lu and Bennett combination as applied to claim 1 discloses photography means, an information storage area, code conversion means, and code information recording means.

The Lu and Bennett combination does not disclose eye position detection means for detecting center positions of eyes in the face in an original image represented by original image data obtained by photographing the face photo area; normalization means for obtaining a normalized original image by normalizing the original image in such a manner that a distance between the center positions of the eyes that have been detected becomes a predetermined value; and cutting means for obtaining face image data representing the face photo by cutting an image having the predetermined format from the normalized original image with reference to the distance between the center positions of the eyes in the face in the normalized original image.

Sakuramoto teaches:

eye position detection means for detecting center positions of eyes in the face in an original image represented by original image data obtained by photographing the face photo area (“algorithm which detects the location equivalent to the eyes”; “location which corresponds in the center of abbreviation along the longitudinal direction which intersects perpendicularly in the direction of top and bottom of the location which is equivalent to the detected both-eyes section in invention according to claim 3 So that it may consider as the center position of the trimming field along a longitudinal direction”; Sakuramoto: paragraph [0021]), (“detects

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respectively the location equivalent to the location and the eye section equivalent”; Sakuramoto: paragraph [0030]);

normalization means for obtaining a normalized original image by normalizing the original image in such a manner that a distance between the center positions of the eyes that have been detected becomes a predetermined value (“trimming field to said subject-copy image is set up based on the location equivalent to the location and the eye section equivalent”; Sakuramoto: paragraph [0029]); and

cutting means for obtaining face image data representing the face photo by cutting an image having the predetermined format from the normalized original image with reference to the distance between the center positions of the eyes in the face in the normalized original image (“sets up the trimming field to said subject-copy image”; Sakuramoto: paragraph [0030]).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Lu and Bennett combination as applied to claim 1, to include eye position detection, normalization, and cutting of Sakuramoto, in order to “mitigate the burden of the operator at the time of setting up of a trimming field” and isolate the facial features in a “short time [with a] high degree of accuracy” (Sakuramoto: paragraph [0009] and [0014]).

Regarding **claim 5**, the Lu and Bennett combination as applied to claim 4 teaches a photography means for obtaining original image data representing an original image including the face of the person, the ID card of whom is being generated, by photographing the face (fig. 2a, numeral 28a; “video camera apparatus is used to obtain pictures of each of the selected individuals”; Lu: col. 6, lines 58-59).

The Lu and Bennett combination does not disclose eye position detection means for detecting center positions of eyes in the face in the original image; normalization means for obtaining a normalized original image by normalizing the original image in such a manner that a distance between the center positions of the eyes that have been detected becomes a predetermined value; and cutting means for obtaining face image data representing the face photo by cutting an image having the predetermined format from the normalized original image with reference to the distance between the center positions of the eyes in the face in the normalized original image.

Sakuramoto teaches:

eye position detection means for detecting center positions of eyes in the face in the original image (“algorithm which detects the location equivalent to the eyes”; “location which corresponds in the center of abbreviation along the longitudinal direction which intersects perpendicularly in the direction of top and bottom of the location which is equivalent to the detected both-eyes section in invention according to claim 3 So that it may consider as the center position of the trimming field along a longitudinal direction”; Sakuramoto: paragraph [0021]), (“detects respectively the location equivalent to the location and the eye section equivalent”; Sakuramoto: paragraph [0030]);

normalization means for obtaining a normalized original image by normalizing the original image in such a manner that a distance between the center positions of the eyes that have been detected becomes a predetermined value (“trimming field to said subject-copy image is set up based on the location equivalent to the location and the eye section equivalent”; Sakuramoto: paragraph [0029]); and

cutting means for obtaining face image data representing the face photo by cutting an image having the predetermined format from the normalized original image with reference to the distance between the center positions of the eyes in the face in the normalized original image (“sets up the trimming field to said subject-copy image”; Sakuramoto: paragraph [0030]).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Lu and Bennett combination as applied to claim 1, to include eye position detection, normalization, and cutting of Sakuramoto, in order to “mitigate the burden of the operator at the time of setting up of a trimming field” and isolate the facial features in a “short time [with a] high degree of accuracy” (Sakuramoto: paragraph [0009] and [0014]).

9. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Lu et al. (US 5,432,864) with Bennett (US 5,642,160) as applied to claim 6 above, and further in view of Simon (US 2003/0086591 A1).

Regarding **claim 8**, the Lu and Bennett combination as applied to claim 6 teaches registration means for registering personal information and code information of a large number of people (fig 2a, 2b, numeral 6; Lu);

code conversion means for converting the photographed face data into code information (fig. 2b, numeral 7; “calculational process forms a standard set of principal facial feature components, or “Eigenfeatures””; Lu: col. 8, lines 12-15);

code judgment means for carrying out judgment as to whether or not the code information obtained by the code conversion means mostly agrees with the correlation code information (fig. 3, numeral 17; “comparison with the Eigenface parameters that were previously

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read from the escort memory is then employed to validate the cardholder's identity"; Lu: col. 9, lines 32-35); and

authentication information output means for outputting authentication information representing that the holder has been authenticated in the case where results of the judgment by the information judgment means and the code judgment means are both affirmative (fig. 3, numerals 18, 21; "the decision output module 18 will issue an authorization message 19 that allows e.g. access to a controlled area", "decision module 18 will issue a message (displayable e.g. on terminal 21)"; Lu: col. 9, lines 46-64).

The Lu and Bennett combination does not teach information judgment means for carrying out judgment as to whether or not correlation personal information and correlation code information respectively corresponding to the personal information and the code information that has been read has been registered with the registration means.

Simon, in the same field of "personal identity cards that are tamper-proof and machine readable" (Simon: paragraph [0001]), teaches information judgment means for carrying out judgment as to whether or not correlation personal information and correlation code information respectively corresponding to the personal information and the code information that has been read has been registered with the registration means ("means for validating the card by allowing a comparison of biometric data stored in a database of central registry with biometric data taken from the person presenting the ID card"; Simon: paragraph [0012]).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Lu and Bennett combination as applied to claim 1, to include information

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judgment means of Simon, in order to “validate the ID card itself and the identity of the card bearer” (Simon: paragraph [0012]).

10. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Lu et al. (US 5,432,864), Bennett (US 5,642,160), and Simon (US 2003/0086591 A1) as applied to claim 6 above, and further in view of Sakuramoto (JP 2002-152492).

Regarding **claim 9**, the Lu, Bennett, and Simon combination as applied to claim 6 discloses all elements within claim 6.

The Lu, Bennett, and Simon combination does not disclose eye position detection means for detecting center positions of eyes in the face in an original image represented by original image data obtained by photographing the face photo area; normalization means for obtaining a normalized original image by normalizing the original image in such a manner that a distance between the center positions of the eyes that have been detected becomes a predetermined value; and cutting means for obtaining face image data representing the face photo by cutting an image having the predetermined format from the normalized original image with reference to the distance between the center positions of the eyes in the face in the normalized original image.

Sakuramoto teaches:

eye position detection means for detecting center positions of eyes in the face in an original image represented by original image data obtained by photographing the face photo area (“algorithm which detects the location equivalent to the eyes”; “location which corresponds in the center of abbreviation along the longitudinal direction which intersects perpendicularly in the direction of top and bottom of the location which is equivalent to the detected both-eyes section in invention according to claim 3 So that it may consider as the center position of the

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trimming field along a longitudinal direction”; Sakuramoto: paragraph [0021]), (“detects respectively the location equivalent to the location and the eye section equivalent”; Sakuramoto: paragraph [0030]);

normalization means for obtaining a normalized original image by normalizing the original image in such a manner that a distance between the center positions of the eyes that have been detected becomes a predetermined value (“trimming field to said subject-copy image is set up based on the location equivalent to the location and the eye section equivalent”; Sakuramoto: paragraph [0029]); and

cutting means for obtaining face image data representing the face photo by cutting an image having the predetermined format from the normalized original image with reference to the distance between the center positions of the eyes in the face in the normalized original image (“sets up the trimming field to said subject-copy image”; Sakuramoto: paragraph [0030]).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Lu, Bennett, and Simon combination as applied to claim 6, to include eye position detection, normalization, and cutting of Sakuramoto, in order to “mitigate the burden of the operator at the time of setting up of a trimming field” and isolate the facial features in a “short time [with a] high degree of accuracy” (Sakuramoto: paragraph [0009] and [0014]).

11. **Claims 10 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al. (US 5,432,864) in view of Simon (US 2003/0086591 A1), and further in view of Wood (US 2002/0116626 A1).

Regarding **claim 10**, the Lu reference teaches a face authentication apparatus comprising: registration means for registering personal information and code information of a large

number of people (fig 2a, 2b, numeral 6; Lu);

code conversion means for converting the photographed face data into code information (fig. 2b, numeral 7; “calculational process forms a standard set of principal facial feature components, or “Eigenfeatures””; Lu: col. 8, lines 12-15);

code judgment means for carrying out judgment as to whether or not the code information obtained by the code conversion means mostly agrees with the correlation code information (fig. 3, numeral 17; “comparison with the Eigenface parameters that were previously read from the escort memory is then employed to validate the cardholder’s identity”; Lu: col. 9, lines 32-35); and

authentication information output means for outputting authentication information representing that the holder has been authenticated in the case where results of the judgment by the information judgment means and the code judgment means are both affirmative (fig. 3, numerals 18, 21; “the decision output module 18 will issue an authorization message 19 that allows e.g. access to a controlled area”, “decision module 18 will issue a message (displayable e.g. on terminal 21)”; Lu: col. 9, lines 46-64).

The Lu reference does not teach information acquisition means, information judgment means for carrying out judgment as to whether or not correlation personal information and correlation code information respectively corresponding to the personal information and the code information that has been obtained has been registered with the registration means.

Simon, in the same field of “personal identity cards that are tamper-proof and machine readable” (Simon: paragraph [0001]), teaches information judgment means for carrying out judgment as to whether or not correlation personal information and correlation code information

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respectively corresponding to the personal information and the code information that has been read has been registered with the registration means (“means for validating the card by allowing a comparison of biometric data stored in a database of central registry with biometric data taken from the person presenting the ID card”; Simon: paragraph [0012]).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Lu reference, to include information judgment means of Simon, in order to “validate the ID card itself and the identity of the card bearer” (Simon: paragraph [0012]).

Wood, in the same field of “authentication system” (Wood: paragraph [0002]), teaches information acquisition means for obtaining the photographed face data, the personal information, and the code information (fig. 1, numeral 140; “network 140 may be wired such as fiber optic telephone network; wireless”; Wood: paragraph [0019]) obtained by the face authentication terminal in Claim 6 (see combination, rejection, motivation above in claim 6).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Lu and Simon combination as stated above, to include an information acquisition means of Wood, in order to provide an accessible, multi-faceted interface to the user for verification and authentication purposes.

Regarding **claim 11**, the Lu reference teaches a face authentication apparatus comprising: registration means for registering personal information and code information of a large number of people (fig 2a, 2b, numeral 6; Lu);

code conversion means for converting the photographed face data into code information (fig. 2b, numeral 7; “calculational process forms a standard set of principal facial feature components, or “Eigenfeatures””; Lu: col. 8, lines 12-15);

code judgment means for carrying out judgment as to whether or not the code information obtained by the code conversion means mostly agrees with the correlation code information (fig. 3, numeral 17; “comparison with the Eigenface parameters that were previously read from the escort memory is then employed to validate the cardholder’s identity”; Lu: col. 9, lines 32-35); and

authentication information output means for outputting authentication information representing that the holder has been authenticated in the case where results of the judgment by the information judgment means and the code judgment means are both affirmative (fig. 3, numerals 18, 21; “the decision output module 18 will issue an authorization message 19 that allows e.g. access to a controlled area”, “decision module 18 will issue a message (displayable e.g. on terminal 21)”; Lu: col. 9, lines 46-64).

The Lu reference does not teach the face authentication terminal according to Claim 6, information acquisition means, information judgment means for carrying out judgment as to whether or not correlation personal information and correlation code information respectively corresponding to the personal information and the code information that has been obtained has been registered with the registration means, and the face authentication terminal and the face authentication apparatus being connected to each other in a manner enabling transmission and reception of various kinds of information.

Simon, in the same field of “personal identity cards that are tamper-proof and machine readable” (Simon: paragraph [0001]), teaches information judgment means for carrying out judgment as to whether or not correlation personal information and correlation code information respectively corresponding to the personal information and the code information that has been

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read has been registered with the registration means (“means for validating the card by allowing a comparison of biometric data stored in a database of central registry with biometric data taken from the person presenting the ID card”; Simon: paragraph [0012]).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Lu reference, to include information judgment means of Simon, in order to “validate the ID card itself and the identity of the card bearer” (Simon: paragraph [0012]).

Wood, in the same field of “authentication system” (Wood: paragraph [0002]), teaches: the face authentication terminal (fig. 1, numeral 110; “authentication device”) according to Claim 6 (see combination, rejection, and motivation above in claim 6);

information acquisition means for obtaining the photographed face data, the personal information, and the code information obtained by the face authentication terminal (fig. 1, numeral 140; “network 140 may be wired such as fiber optic telephone network; wireless”; Wood: paragraph [0019]); and

the face authentication terminal and the face authentication apparatus are connected to each other in a manner enabling transmission and reception (fig. 1, numeral 140; “network 140 may be wired such as fiber optic telephone network; wireless”; Wood: paragraph [0019]).


It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Lu and Simon combination as stated above, to include face authentication terminal, information acquisition means, and a connection between the authentication terminal and apparatus of Wood, in order to have an authentication device “whose applicability can be greatly expanded” by allowing “active modification/update of the [data]” (Wood: paragraph [0007]).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward Park whose telephone number is (571) 270-1576. The examiner can normally be reached on M-F 09:00-17:00, (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on (571) 272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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